

## Complete Summary

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### GUIDELINE TITLE

Eating disorders among children and adolescents.

### BIBLIOGRAPHIC SOURCE(S)

Finnish Medical Society Duodecim. Eating disorders among children and adolescents. In: EBM Guidelines. Evidence-Based Medicine [Internet]. Helsinki, Finland: Wiley Interscience. John Wiley & Sons; 2005 Feb 8 [Various].

### GUIDELINE STATUS

Note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

### \*\* REGULATORY ALERT \*\*

#### FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- [October 15, 2004, Antidepressants](#): Public Health Advisory issued asking manufacturers of all antidepressant drugs to revise the labeling for their products to include a boxed warning and expanded warning statements that alert health care providers to an increased risk of suicidality (suicidal thinking and behavior) in children and adolescents being treated with these agents.

### COMPLETE SUMMARY CONTENT

\*\* REGULATORY ALERT \*\*

SCOPE

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IDENTIFYING INFORMATION AND AVAILABILITY

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## SCOPE

### DISEASE/CONDITION(S)

Eating disorders including anorexia and bulimia nervosa

### GUIDELINE CATEGORY

Counseling  
Diagnosis  
Evaluation  
Management  
Treatment

### CLINICAL SPECIALTY

Family Practice  
Nutrition  
Pediatrics  
Psychiatry  
Psychology

### INTENDED USERS

Health Care Providers  
Physicians  
Psychologists/Non-physician Behavioral Health Clinicians

### GUIDELINE OBJECTIVE(S)

Evidence-Based Medicine Guidelines collect, summarize, and update the core clinical knowledge essential in general practice. The guidelines also describe the scientific evidence underlying the given recommendations.

### TARGET POPULATION

Children and adolescents with known or suspected eating disorders, such as anorexia nervosa or bulimia nervosa

### INTERVENTIONS AND PRACTICES CONSIDERED

#### Diagnosis/Evaluation

1. Screening questionnaire
2. Evaluation for signs and symptoms of eating disorders
3. Laboratory tests to evaluate for anemia and low blood glucose levels (anorexia nervosa) or for hypokalaemia and increased serum amylase (bulimia nervosa)

#### Treatment/Management/Counseling

1. Treatment of severe malnutrition in a somatic ward
2. Psychotherapy (individual and family)
3. Cognitive therapy and medication (bulimia nervosa)
4. Psychopharmaceuticals (e.g., neuroleptics and antidepressants)

#### MAJOR OUTCOMES CONSIDERED

- Eating disorder symptomatology
- Remission rates
- Efficacy of treatment at reducing symptoms of eating disorders and improving prognosis

### METHODOLOGY

#### METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)  
Hand-searches of Published Literature (Secondary Sources)  
Searches of Electronic Databases

#### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The evidence reviewed was collected from the Cochrane database of systematic reviews and the Database of Abstracts of Reviews of Effectiveness (DARE). In addition, the Cochrane Library and medical journals were searched specifically for original publications.

#### NUMBER OF SOURCE DOCUMENTS

Not stated

#### METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

#### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

##### Levels of Evidence

- A. Strong research-based evidence. Multiple relevant, high-quality scientific studies with homogenic results.
- B. Moderate research-based evidence. At least one relevant, high-quality study or multiple adequate studies.
- C. Limited research-based evidence. At least one adequate scientific study.
- D. No research-based evidence. Expert panel evaluation of other information.

#### METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses  
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary. The recommendations that follow are based on the previous version of the guideline.

The levels of evidence [A-D] supporting the recommendations are defined at the end of the "Major Recommendations" field.

Objectives

- Remember that eating disorders are very common among adolescent girls.
- One must remember to look for signs of an eating disorder; patients seldom report it themselves.
- The diagnosis and planning of treatment are the responsibility of special personnel.

Basic Rules

- An eating disorder refers to states in which food and nourishment have an instrumental and manipulative role: food has become a way to regulate the appearance of the body.
- The spectrum of eating disorders is vast. The most common disorders are anorexia nervosa and bulimia nervosa. In addition, incomplete clinical pictures and simple binge eating have become more general.
- Even small children can have different kinds of eating disorders that relate to difficulties in the relationships between the child and his/her caretaker.

### Aetiology

- Currently eating disorders are considered to be multifarious. Genetic and sociocultural factors and also individual dynamics all affect eating disorders.
- The typical age of onset is adolescence, when the body changes and grows.
- Anorexia nervosa typically emerges between 14 and 16 years of age or around the age of 18 years. Bulimia appears typically at the age of 19-20 years.
- Eating disorders are 10-15 times more common among girls than boys.
- Every 150th girl between the ages of 14 and 16 years suffers from anorexia nervosa.
- There is no epidemiological data on the occurrence of bulimia, but it is considered to be more common than anorexia nervosa.

### Diagnostic Criteria for Anorexia Nervosa

- The patient does not want to maintain his or her normal body weight.
- The patient's weight is at least 15% below that expected for age and height.
- The patient's body image is distorted.
- The patient is afraid of gaining weight.
- There is no other sickness that would explain the loss of weight.

### Diagnostic Criteria of Bulimia Nervosa

- Desire to be thin, phobic fear of gaining weight
- Persistent preoccupation with eating and an irresistible urge or compulsive need to eat.
- Episodes of binge eating (at least twice a week); control over eating is lost.
- After the episode of binge eating, the person attempts to eliminate the ingested food (e.g., by self-induced vomiting and by abuse of purgatives and diuretics).

### Symptoms

- Anorexia nervosa generally starts gradually.
- Losing weight can either be very rapid or very slow. Generally the patients continue to go to school; they go on with their hobbies and feel great about themselves. Therefore the families are usually surprised to find that their child suffers from malnutrition.
- A screening questionnaire is helpful in the assessment of patients with suspected eating disorder (each positive answer gives one point; 2 or more points suggests an eating disorder).
  1. Do you try to vomit if you feel unpleasantly satiated?

2. Are you anxious with the thought that you cannot control the amount of food you eat?
  3. Have you lost more than 6 kg of weight during the last 3 months?
  4. Do you consider yourself obese although others say you are underweight?
  5. Does food/thinking of food dominate your life?
- Anorectic adolescents deny their symptoms, and it takes time and patience to motivate them to accept treatment.
  - Somatic symptoms include:
    - Disappearance of menstruation
    - The slowing of metabolism, constipation
    - Slow pulse, low blood pressure
    - Flushed and cold limbs
    - Reduction of subcutaneous fat
  - Bulimic adolescents are aware that their eating habits are not normal, but the habit causes so much guilt and shame that seeking treatment is not easy.
  - Bulimia also causes physical symptoms
    - Disturbances of menstruation
    - Disturbances in electrolyte and acid-alkali balances created by frequent vomiting and damage of the enamel of teeth (see the Finnish Medical Society Duodecim guideline "Dental Caries and Other Diseases of the Hard Tissues of the Teeth and Dental Pulp")

### Laboratory Findings

- In anorexia nervosa
  - Slight anaemia
  - Blood glucose levels on the lower border of normal
- In bulimia
  - Hypokalaemia
  - Increased serum amylase (Kinzl, Biebl, & Herold, 1993)

### Differential Diagnosis

- Severe somatic diseases, for example, brain tumours
- Psychiatric diseases--severe depression, psychosis, use of drugs

### Treatment

- If the symptoms correspond to the diagnostic criteria of anorexia nervosa, the situation should be discussed with the family before treatment is arranged.
- The adolescent and his or her family should be made aware of the seriousness of the disorder.
- Sometimes it takes time to motivate the patient to participate in the treatment.
- The treatment is divided into
  - Restoring the state of nutrition
  - Psychotherapeutic treatment
- If the state of malnutrition is life threatening, the patient is first treated in a somatic ward, and thereafter the adolescent is guided into therapy if possible.

- The forms of psychotherapy vary: both individual and family therapy have brought results; in cases of bulimia cognitive therapy and medication (Whittal, Agras, & Gould, 1999) [C] have been successful.
- With adolescents between the ages of 14 and 16 years, positive results have been obtained by treating the entire family, because the adolescent's symptoms are often connected with difficulties to "cut loose" from the family.
- With older patients, individual, supportive, and long-lasting treatment has been the best way to promote recovery.
- A prolonged state of malnutrition and insufficient outpatient care are reasons to direct a patient into forced treatment.

### Medical Treatment

- A specialist should start all drug treatment.
- Different psychopharmaceuticals, for example, neuroleptics and antidepressants, have been tried in the treatment of anorexia nervosa. Controlled studies have proved them indisputably useful only if the disorder is linked to clear depression.
- Most research on the medical treatment of bulimia has concentrated on antidepressants (Bacaltchuk & Hay, 2003) [A], particularly fluoxetine, which has been found to decrease binge eating and vomiting for about two-thirds of bulimic patients.

### Prognosis

- Early intervention improves prognosis.
- Eating disorders comprise a severe group of diseases that are difficult to treat. The prognosis for the near future of anorectic patients is good, but for the long term the prognosis is worse. The percentage of mortality is still 5 to 16%.
- Not enough follow-up research has been carried out on the prognosis of bulimia, but the disease is thought to last years.
- Bulimia can be associated with depression, self-destructiveness, abuse of alcohol or drugs, and other psychological problems.

### Related Evidence

- There are insufficient data to assess whether early intervention is beneficial in anorexia nervosa (Shoemaker, 1997) [D].
- A combination of antidepressants and psychotherapy is more effective than psychotherapy alone, but psychotherapy appeared to be more acceptable to subjects (Bacaltchuk, Hay, & Trefiglio, 2001) [C]. There was a non-significant trend favouring single psychotherapy over single antidepressants.
- Evidence on inpatient versus outpatient care for eating disorders is insufficient for making firm conclusions (Meads et al., 1999) [D].
- Antidepressants appear to be ineffective in the treatment of anorexia nervosa (Claudino et al., 2006; Walsh et al., 2006; Treasure & Schmid, 2005) [B].

### Definitions:

### Levels of Evidence

- A. Strong research-based evidence. Multiple relevant, high-quality scientific studies with homogenic results.
- B. Moderate research-based evidence. At least one relevant, high-quality study or multiple adequate studies.
- C. Limited research-based evidence. At least one adequate scientific study.
- D. No research-based evidence. Expert panel evaluation of other information.

#### CLINICAL ALGORITHM(S)

None provided

### EVIDENCE SUPPORTING THE RECOMMENDATIONS

#### REFERENCES SUPPORTING THE RECOMMENDATIONS

[References open in a new window](#)

#### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

Concise summaries of scientific evidence attached to the individual guidelines are the unique feature of the Evidence-Based Medicine Guidelines. The evidence summaries allow the clinician to judge how well-founded the treatment recommendations are. The type of supporting evidence is identified and graded for select recommendations (see the "Major Recommendations" field).

### BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

#### POTENTIAL BENEFITS

Appropriate diagnosis and treatment of eating disorders among children and adolescents

#### POTENTIAL HARMS

Adverse effects associated with antidepressants.

### IMPLEMENTATION OF THE GUIDELINE

#### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

### INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

#### IOM CARE NEED



Getting Better  
Living with Illness

## IOM DOMAIN

Effectiveness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Finnish Medical Society Duodecim. Eating disorders among children and adolescents. In: EBM Guidelines. Evidence-Based Medicine [Internet]. Helsinki, Finland: Wiley Interscience. John Wiley & Sons; 2005 Feb 8 [Various].

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

2004 Jun (revised 2005 Feb 8)

### GUIDELINE DEVELOPER(S)

Finnish Medical Society Duodecim - Professional Association

### SOURCE(S) OF FUNDING

Finnish Medical Society Duodecim

### GUIDELINE COMMITTEE

Editorial Team of EBM Guidelines

### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Primary Author: Päivi Rantanen

### FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

### GUIDELINE STATUS

Note: This guideline has been updated. The National Guideline Clearinghouse (NGC) is working to update this summary.

### GUIDELINE AVAILABILITY

This guideline is included in "EBM Guidelines. Evidence-Based Medicine" available from Duodecim Medical Publications, Ltd, PO Box 713, 00101 Helsinki, Finland; e-mail: [info@ebm-guidelines.com](mailto:info@ebm-guidelines.com); Web site: [www.ebm-guidelines.com](http://www.ebm-guidelines.com).

#### AVAILABILITY OF COMPANION DOCUMENTS

None available

#### PATIENT RESOURCES

None available

#### NGC STATUS

This NGC summary was completed by ECRI on August 29, 2005. This NGC summary was updated by ECRI on December 22, 2006.

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